

Notice of Allowability

Application No.

09/352,494

Examiner

Tuan V. Ho

Applicant(s)

BREHMER ET AL.

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendments filed on 5/2/06.
2. ☒ The allowed claim(s) is/are 13-19 and 21-41 renumbered as 1-28.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Tuan V Ho
Primary Examiner
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1. Claims 13-19 and 21-41 are allowed.

The prior art of record fails to suggest or disclose:

With regard to claim 13, a method for facilitating high signal throughput of an improved CMOS image sensor comprising a plurality of photo sensors configured in a two-dimensional area, said method comprising producing pixel signals by digitizing said charge signals with an analog-to-digital converter: conditioning said charge signals in said programmable gain amplifier in accordance with said double sampling circuit before said charge signals are digitized to produce the pixel signals; and processing said pixel signals in a pixel processor to produce a desired result.

With regard to claim 19, an architecture for facilitating high signal throughput of an improved CMOS image sensor comprising a plurality of photo sensors configured in a two-dimensional area, said architecture comprising said signal conditioning circuits coupled to a column data bus for receiving charge signals read out from said photo sensors when said photo sensors are addressed by said address signals; a number of analog-to-digital converters, each respectively coupled to one of said conditioning circuits and digitizing said charge signals in parallel to produce pixel signals; and a pixel processor for receiving said pixel signals from said analog-to-digital

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converters, wherein said pixel signals are processed to produce a desired result.

With regard to claim 31, an architecture for facilitating high signal throughput of an improved CMOS image sensor comprising a plurality of photo sensors configured in a two-dimensional area; said architecture comprising a number of analog-to-digital converters, each respectively coupled to one of said conditioning circuits and digitizing said charge signals in parallel to produce pixel signals, a pixel processor for receiving said pixel signals from said analog-to-digital converters; a memory loaded with one or more instructions accessed by the pixel processor; and wherein said pixel signals are processed to produce a desired result.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN HO whose telephone number is (571) 272-7365. The examiner can normally be reached on Mon-Fri from 7AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is (572) 273-8300.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service whose telephone number is (571) 272-2600.



TUAN HO

Primary Examiner

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